Ethnic Differences in Infant and Toddler Health – Roots of Latino Paradox

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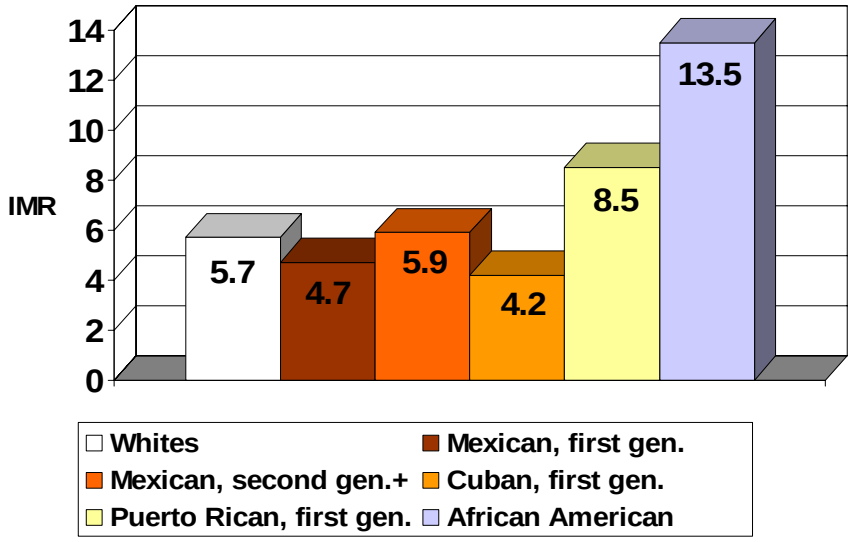
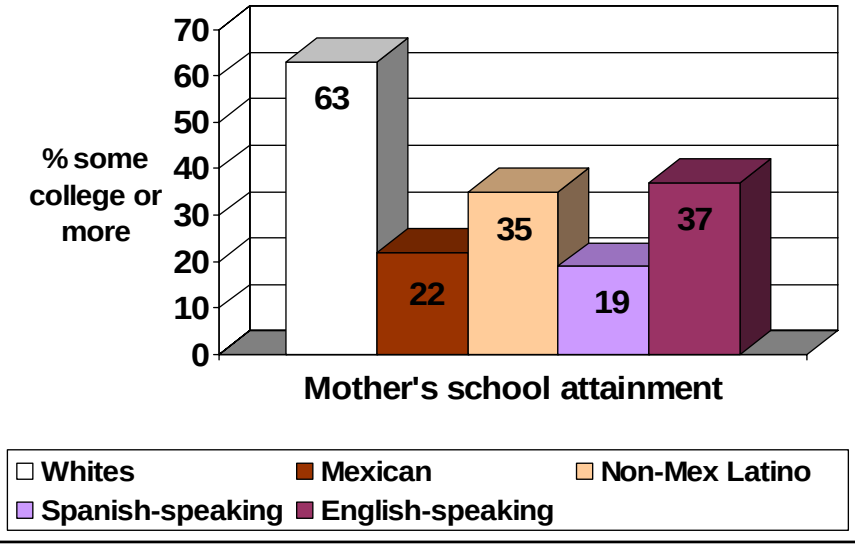
Two Forms of Latino Paradox – Health and Cognitive Development

- Comparable health status among Latinos vis-à-vis middle-class whites. Birth outcomes and mortality rates. (Unadjusted mean differences.)
- Corollary: The immigrant or first-generation paradox. Positive health practices and acculturation to U.S. norms in poor communities.
- Paradox in cognitive development? Does robust early child health contribute to cognitive growth? School-related gaps… perhaps just language?

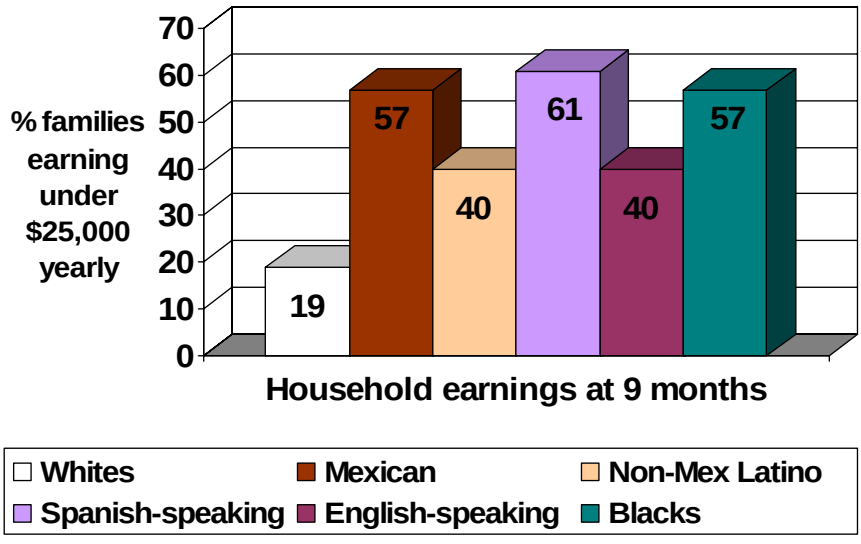
Infant mortality rates by mother's ethnicity and generation in the United States, 2003



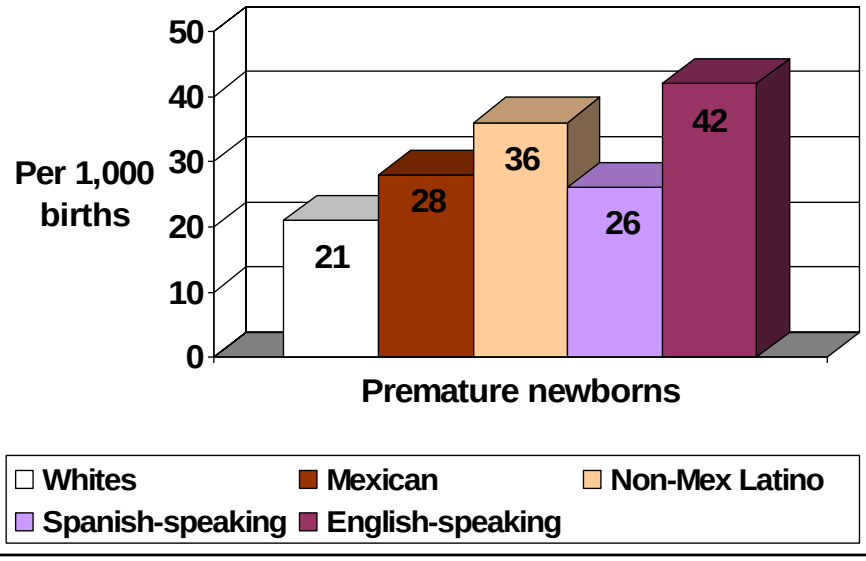
ECLS-B – Attributes of the family sample, weighted *n*=7,933 at 9-month home visit



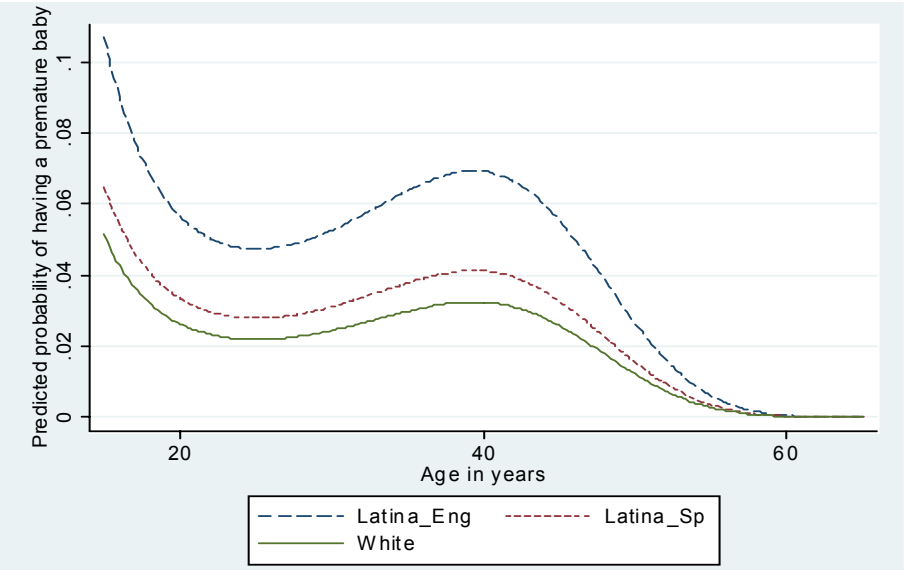
Attributes of the family sample – household earnings, social-class differences



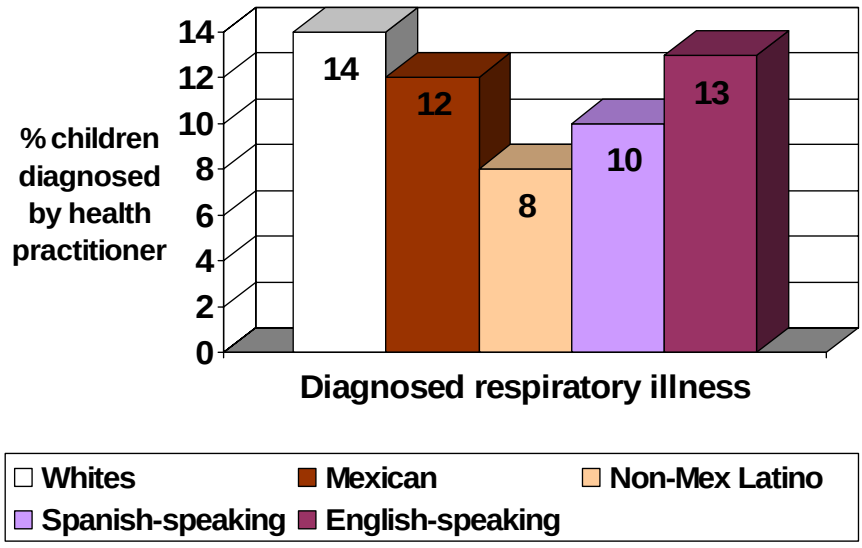
Birth outcomes – Premature births by ethnic and linguistic group



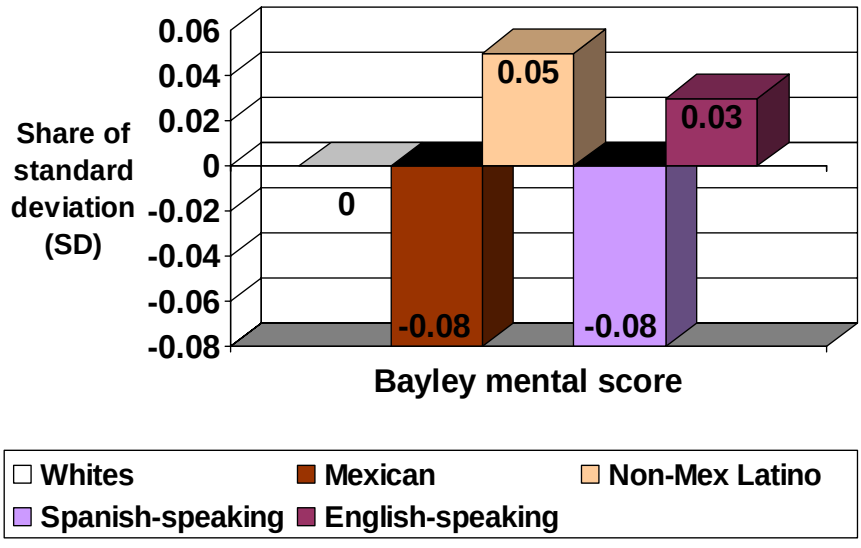
Predicted probability of premature birth by mother's age, ethnic and linguistic group



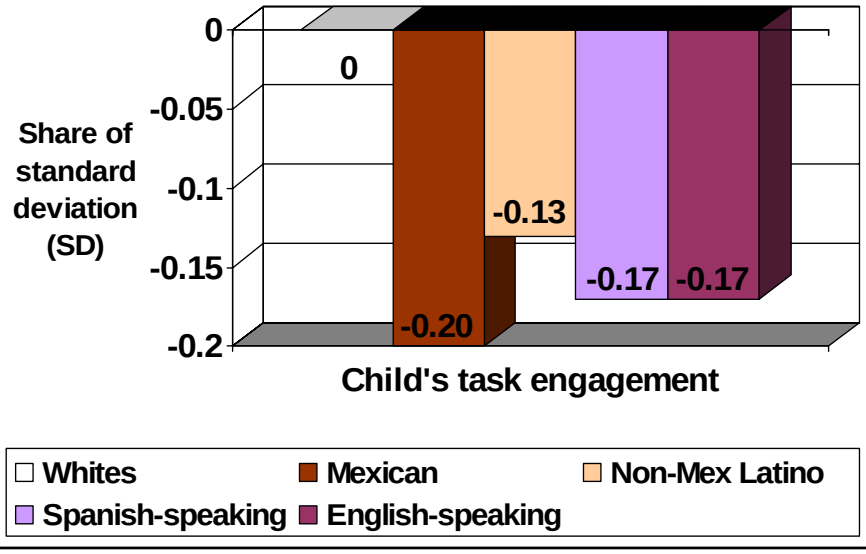
9-month health outcome – Respiratory illness by ethnic and linguistic group



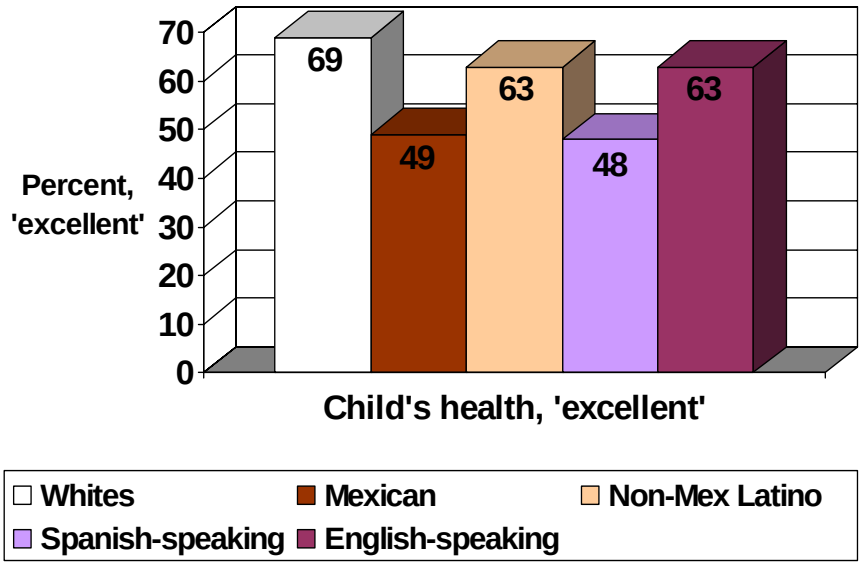
9-month cognitive outcome – Bayley mental score by ethnic and linguistic group



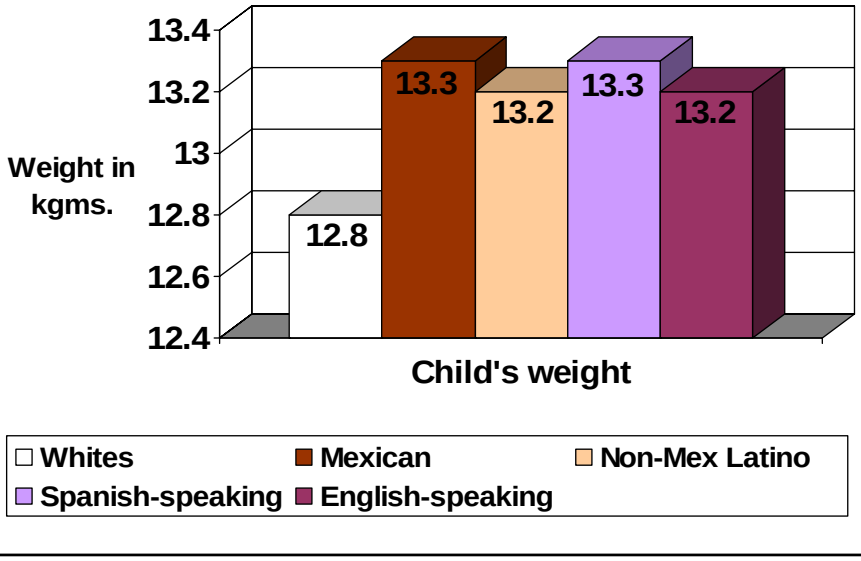
9-month cognitive outcome – Child's engagement in Bayley tasks



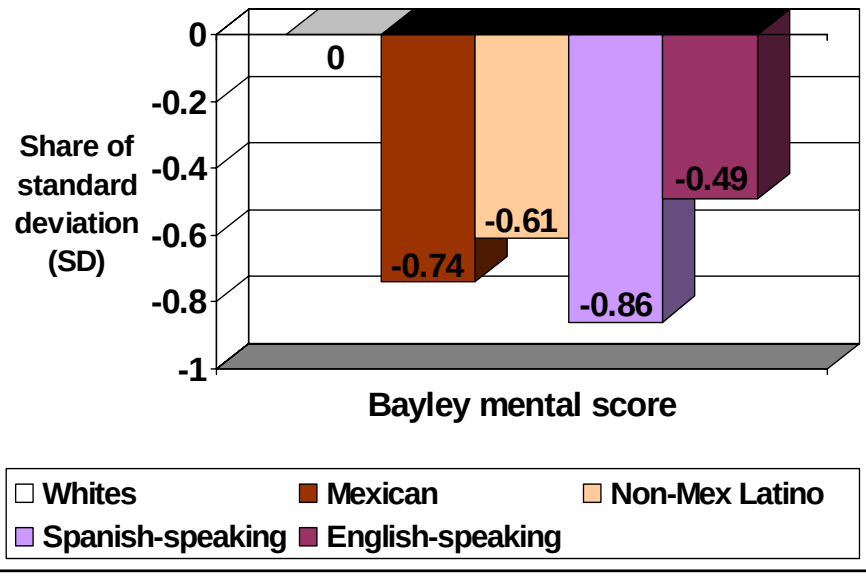
24-month health outcome – Mother rates child's health as 'excellent'



24-month health outcome – Child's weight by ethnic and linguistic group



24-month cognitive outcome – Bayley mental score by ethnic and linguistic group



Panel analysis with blocks of predictors (proximal to distal)

- *Block 1 Predictors*: Mother's prenatal practices, diabetes, multiple births, fertility treatment.
- *Block 2 Predictors:* Mother's intentionality, information about pregnancy and child rearing, first or subsequent birth.
- *Block 3 Predictors:* Maternal practices (NCATS task), mental health, breastfeeding (9 mos.), nutrition, beverages (9 mos.)
- *Block 4 Predictors:* Mother's knowledge of child development, efficacy in raising child, mother's relationships.
- *Block 5 Predictors:* Family structure and social class (SES), father at home, children:adult ratio, maternal employment.
- *Final Block of Predictors:* Child's ethnic membership, home language, foreign born (acculturation).
- *Controls for prior status (Y_{t-1}):* Birth *Y*'s, child health, Bayley mental scores.

Estimating birth outcomes – Logistic regression, odds ratios (p<.05), base wht.SES

	Prematurity	Low-Birthwgt	APGAR
Smoking		2.11	
Multiple births	9.01	22.31	0.45
Previous birth	0.73	0.54	1.75
SES index	0.83	0.72	1.29
Latino, Mexican	2.24		
Latino, other	1.54		
Black	1.90	1.92	
Spanish HL	0.56		
Other Non-Eng.HL		0.48	

9-month health outcomes – Logistic regression, odds ratios (p<.05), base white SES

	Respiratory illness (diagnosed)	Child in 'excellent' health
Female child	0.64	1.18
Low birthwgt. (B)		0.73 – 0.41
Multiple births	0.63	
Breastfeeding	0.64	
Knowledge, dev.	1.14	
SES index		1.20
Child:adult ratio	1.25	0.86
Latino, non-Mex	0.50	
Spanish HL		0.54

9-month cognitive outcomes – WLS regression coefficients (with age controls)

	Bayley mental score	Child's task engagement
Female child	+ ***	+ *
Premature (B)	- ***	
Low birthwgt (B)	- ***	- ***
Multiple births	- ***	- ***
Mat.NCATS	+ **	+ **
Mat.depression	- **	
Child:adult ratio	- ***	- ***
Latino, Mexican		- *
r^2	0.72 (age)	0.08

24-month health outcomes – Logistic regression, odds ratios (p<.05), base wht.SES

	Asthma (diagnosed)	Child in 'excellent' health
Female child	0.67	1.18
Low birthwgt. (B)	1.4	0.73 – 0.41
Multiple births	0.63	
Breastfeeding	0.64	
Knowledge, dev.	1.14	
SES index		1.20
Child:adult ratio	1.25	0.86
Latino, non-Mex	0.50	
Spanish HL		0.54

24-month cognitive outcome: Bayley mental score – WLS coefficients (age control and Bayley at 9 mos.)

	Bayley mental score
Female child	+ ***
Premature (B)	- ***
Low birthwgt (B)	- ***
Child demands, mother talk	+ ***
Child difficult to raise ('efficiacy')	- ***
SES index	+ ***
Child:adult ratio	- *
Latino, Mexican – Latino, other	- * - **
Spanish HL	- **
r^2	0.25

Summary of Findings

- Replicated earlier findings regarding an epidemiological, immigrant paradox (unadjusted mean differences for Latino subgroups).
- But findings are limited to birth outcomes, along with the persisting benefits of robust birth status.
- Protective factors exercised by Mexican-heritage, less acculturated mothers diminish some by 9 months.
- By 24 months Latino toddlers, including those raised by less acculturated mothers, are looking more like other children in poor families.
- Relationships of covariates help to unpack protective (and detrimental) factors observed in Latino and less acculturated families.